

XII. ENERGY

The chapter comprises data that characterize the energy flows.

The overall energy balance is worked out in accordance with the Eurostat principles and methods and is presented in three matrices:

- primary energy matrix, which comprises the primary energy production, import, export and stock changes;

- converted energy matrix - represents the fuel input for the production of other types of fuel/energy and the transformation output of types of fuel/energy;

- final energy consumption matrix - comprises used fuel/energy for final energy or non-energy consumption.

The overall energy balance is based on regular yearly statistical surveys data about:

- electricity and heat production;
- fuel and energy consumption;
- energy-transforming processes balance.

Data are obtained from the National material balance sheets for fuel/energy and the foreign trade statistics.

Primary energy is the energy obtained from nature and not transformed, such as hydro power, coal, crude oil, natural gas, firewood and thermal energy, produced in chemical processes.

Secondary energy is that, obtained by transforming the primary energy (or other types of secondary energy), such as electricity, derived gases, oil products.

The gross energy consumption includes the amount of primary energy, produced in the country, net imports of various energy sources (primary and secondary) and stock changes.

Final energy consumption represents the energy which is supplied and used for energy (excluding production of another type of energy) and non-energy needs of consumers.

Data on consumption of energy-producing enterprises supplies information on energy used for exploitation of the equipment installed at the primary energy producing and energy-transforming enterprises.

The indicator 'Marine bunkering' represents the fuel deliveries needed for long distance travel of ships irrespective of their nationality.

The whole heat production of Public plants and only the heat sold to third parties from Autoproducer plants are reported in the energy balance sheet. The quantities of fuel consumed in the Autoproducer plants for the production of heat, used for inner plant's activities, are reported in the figures about the final energy consumption by the relevant sector of economic activity.

Oil fuels used for transport activities, regardless of the activity sector (including households consumption), are reported as final consumption in the 'Transport' sector.

Nuclear energy is reported as released from reactors heat.

Hydro-energy is reported as electric energy produced in hydro-power plants, excluding the production of pumped storage stations. The difference between inputs into and outputs from pumped storage operations is included under energy branch consumption.

The information on the overall energy balance is presented in thousand tons of oil equivalent. Joule and its multiples are used as general energy measure unit in the world practice. The conversion from one type of measure unit into another is effected by the following relation:

$$\begin{aligned} 1 \text{ Gigajoule} &= 34 \text{ kg coal equivalent} = \\ &= 0.239 \text{ Gcal} = 278 \text{ kWh} = \\ &= 0.0239 \text{ toe} \end{aligned}$$

Data in Table 12 'Energy independence of the country' indicate the national provision with domestic primary energy sources.

Some of the totals (rows or columns) are not equal to the sum of the constituents because of the recalculation the quantities of energy sources from a specific type of measure in general energy measure and procedures of figures rounding.

More detailed information can be found in the specialized annual publication 'Energy Balance Sheets', issued by the NSI.